Supplementary Appendix

to

$CHADS_2$ and CHA_2DS_2-VASc Score to Assess Risk of Stroke and Death in Patients paced for Sick Sinus Syndrome

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Svendsen JH, Nielsen JC, Darkner S et al. $CHADS_2$ and CHA_2DS_2-VASc score to assess risk of stroke and death in patients paced for sick sinus syndrome.

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II. Supplemental Results

Stroke related disability

For 67 (70.6%) strokes, disability related to stroke was known: ten patients (14.9%) had severe stroke related disability (bed ridden, dependent on nursing, cannot walk without help), 16 (23.9%) had moderate disability (can walk without help, need help with certain functions) and 11 (16.4%) had slight disability.

$CHADS_2$ and CHA_2DS_2-VASc score distribution

The $CHADS_2$ score distribution in the cohort was: 0: 357 patients (25.2%); 1: 445 patients (31.5%); 2: 363 patients (25.7%); 3: 151 patients (10.7%); 4: 68 patients (4.8%); 5: 26 patients (1.8%), and 6: 5 patients (0.4%). Similarly, the CHA_2DS_2-VASc score was: 0: 93 patients (6.6 %); 1: 163 patients (11.5%); 2: 234 patients (16.5%); 3: 308 patients (21.8%); 4: 287 patients (20.3%); 5: 204 patients (14.4%); 6: 67 patients (4.7%); 7: 42 patients (3.0%); 8: 14 patients (1.0%), and 9: 3 patients (0.2%).

III. Supplementary Tables

Table S1: Harrell's C of Concordance (C Statistic). N=1,415.

End Point	Variable	C	(95 % CI)	Simpler variable	C	95 % CI
Stroke	$CHADS_2$	0.62	(0.56-0.68)	AS_2	0.62	(0.57-0.70)
	CHA_2DS_2-VASc	0.60	(0.54-0.66)	A_2S_2A	0.62	(0.56-0.68)
Death	$CHADS_2$	0.66	(0.63-0.69)	ACD	0.69	(0.67-0.72)
	CHA_2DS_2-VASc	0.67	(0.64-0.70)	A_2CDVA	0.70	(0.67-0.72)

Table S1

$CHADS_2$ score (C: Congestive heart failure, **H**: Hypertension, **A**: Age≥75 years, **D**: Diabetes mellitus, **S**: prior Stroke/TIA (double risk weight)) which gives a score from 0 to 6. **CHA_2DS_2 –VASc** score (C: Congestive heart failure, **H**: Hypertension, **A_2**: Age≥75 years (double risk weight), **D**: Diabetes mellitus, **S**: previous Stroke/TIA/arterial embolism (double risk weight), **V**: Vascular disease, **A**: Age 65-74 years, **Sc**: (female) Sex category) which gives a total score from 0 to 9.

AS_2: A+ S_2 alone. **A_2S_2A**: A_2, S_2 and A alone. **ACD**: A, C and D alone. **A_2CDVA**: A_2, C, D, V and A alone.

Table S2: $CHADS_2$ score and its association with stroke in all patients (n = 1,415) and patients with no OAC at baseline.

End point STROKE		All patients (n=1,415)		No OAC at baseline (n=1,415-197=1,218)	
Variable	Weight	HR (95% CI)	p	HR (95% CI)	p
All combined:					
$CHADS_2$ (continuous, 0-6)	-	1.41 (1.22-1.64)	<0.001	1.43 (1.23-1.68)	<0.001
Five components of $CHADS_2$:					
C (NYHA at baseline > I) *	1	1.23 (0.78-1.93)	0.37	1.08 (0.66-1.76)	0.76
H (hypertension)	1	1.38 (0.91-2.11)	0.13	1.37 (0.88-2.14)	0.17
A (age ≥ 75)	1	2.19 (1.43-3.37)	<0.001	2.41 (1.52-3.84)	<0.001
D (diabetes)	1	1.31 (0.68-2.53)	0.42	1.35 (0.67-2.70)	0.40
S_2 (previous TIA or stroke)	2	1.61 (1.25-2.06)**	<0.001	1.72 (1.32-2.23)	<0.001
A and S_2 alone ($A+S_2$):					
AS_2 (0-3)	-	1.67 (1.37-2.04)	<0.001	1.76 (1.43-2.16)	<0.001

Table S2.

$CHADS_2$ score and its association with stroke in all patients (n = 1,415) and patients with no OAC at baseline (n=1,218). Abbreviations: **HR**, hazard ratio; **OAC**, oral anticoagulation; **$CHADS_2$** score (C: Congestive heart failure, **H**: Hypertension, **A**: Age≥75 years, **D**: Diabetes mellitus, **S**: prior Stroke/TIA (double risk weight)) which gives a score from 0 to 6.

* Five patients with unknown NYHA at baseline count as 0.

** S_2 takes the values 0 and 2. HR corresponds to an increase in S_2 by 1.

Table S3: CHA_2DS_2 -VASc score and its association with stroke in all patients (n = 1,415) and patients with no OAC at baseline (n=1,218).

End point STROKE		All patients (n=1,415)		No OAC at baseline (n=1,415-197=1,218)	
Variable	Weight	HR (95% CI)	p	HR (95% CI)	p
All combined:					
CHA_2DS_2-VASc (continuous, 0-9)	-	1.25 (1.12-1.40)	<0.001	1.26 (1.12-1.43)	<0.001
Eight components of CHA_2DS_2-VASc:					
C (NYHA at baseline > I or LVEF < 40%)*	1	1.23 (0.79-1.93)	0.35	1.11 (0.69-1.80)	0.67
H (hypertension)	1	1.38 (0.91-2.11)	0.13	1.37 (0.88-2.14)	0.17
A_2 (age ≥ 75)	2	1.66 (1.24-2.22)**	<0.001	1.72 (1.26-2.35) **	<0.001
D (diabetes)	1	1.31 (0.68-2.53)	0.42	1.35 (0.67-2.70)	0.40
S_2 (previous TIA, stroke or arterial embolism)	2	1.49 (1.16-1.91)***	0.002	1.59 (1.23-2.07) ***	<0.001
V (arteriosclerotic heart disease)	1	1.33 (0.86-2.05)	0.19	1.26 (0.79-2.00)	0.33
A (65 ≤ age < 75)	1	See A_2 above	-	See A2 above	-
Sc(Female)	1	0.95 (0.62-1.45)	0.82	0.98 (0.63-1.53)	0.93
A_2, S_2 and A alone (A_2+S_2+A):					
A_2S_2A (0-4)	-	1.49 (1.25-1.78)	<0.001	1.56 (1.29-1.87)	<0.001

Table S3:

CHA_2DS_2 -VASc score and its association with stroke in all patients (n = 1,415) and patients with no OAC at baseline (n=1,218).Abbreviations: **HR**, hazard ratio; **OAC**, oral anticoagulation; **CHA_2DS_2 –VASc** score (C: Congestive heart failure, **H**: Hypertension, **A_2**: Age≥75 years (double risk weight), **D**: Diabetes mellitus, **S**: previous Stroke/TIA/arterial embolism (double risk weight), **V**: Vascular disease, **A**: Age 65-74 years, **Sc**: (female) Sex category) which gives a total score from 0 to 9.

* Patients with unknown NYHA or unknown LVEF at baseline count as 0

** For the sum of A2 and A

*** S_2 takes the values 0 and 2. HR corresponds to an increase in S_2 by 1.

Table S4: $CHADS_2$ score and its association with death in all patients, patient with no AF and patients with no OAC at baseline.

End point DEATH Variable	Weight	All patients (n=1,415) HR (95% CI)	p	No AF at baseline (n=1,415-621=794) HR (95% CI)	p	No OAC at baseline (n=1,415-197=1,218) HR (95% CI)	p
All combined:							
$CHADS_2$ (continuous, 0-6)	-	1.46 (1.36-1.56)	<0.001	1.46 (1.32-1.61)	<0.001	1.45 (1.35-1.57)	<0.001
Five individual components of $CHADS_2$:							
C (NYHA at baseline > I) *	1	2.07 (1.70-2.52)	<0.001	1.68 (1.28-2.22)	<0.001	1.91 (1.54-2.36)	<0.001
H (medical treatment for hypertension)	1	1.04 (0.84-1.28)	0.74	1.22 (0.92-1.62)	0.17	1.06 (0.85-1.33)	0.59
A (age>=75)	1	3.76 (2.99-4.72)	<0.001	3.78 (2.77-5.15)	<0.001	3.89 (3.04-4.98)	<0.001
D (diabetes)	1	1.88 (1.42-2.48)	<0.001	2.22 (1.56-3.17)	<0.001	1.87 (1.39-2.52)	<0.001
S_2 (previous TCI or previous stroke)	2	1.28 (1.12-1.46)	<0.001	1.20 (0.99-1.45)	0.07	1.30 (1.13-1.51)	<0.001
A, C and D alone (A+C+D):							
ACD (0-3)	-	2.24 (2.00-2.52)	<0.001	2.22 (1.88-2.61)	<0.001	2.20 (1.94-2.49)	<0.001

Table S4.

$CHADS_2$ score and its association with death in all patients (n = 1,415) and patients with no AF (n=794) and no OAC at baseline (n=1,218). Abbreviations: **HR**, hazard ratio; **OAC**, oral anticoagulation; **$CHADS_2$** score (C: Congestive heart failure, **H**: Hypertension, **A**: Age≥75 years, **D**: Diabetes mellitus, **S**: prior Stroke/TIA (double risk weight)) which gives a score from 0 to 6.

* Five patients with unknown NYHA at baseline count as 0.

** S_2 takes the values 0 and 2. HR given here corresponds to an increase in S_2 by 1.

Table S5: CHA_2DS_2 -VASc score and its association with death in all patients, patient with no AF and patients with no OAC at baseline

End point DEATH		All patients (n=1,415)		No AF at baseline (n=1,415-621=794)		No OAC at baseline (n=1,415-197=1,218)	
Variable	Weight	HR (95% CI)	p	HR (95% CI)	p	HR (95% CI)	p
All combined:							
CHA_2DS_2-VASc (continuous, 0-9)	-	1.39 (1.31-1.46)	<0.001	1.36 (1.26-1.47)	<0.001	1.39 (1.31-1.47)	<0.001
Eight individual parts of CHA_2DS_2-VASc:							
C (NYHA at baseline > I or LVEF<40%) *	1	2.11 (1.74-2.58)	<0.001	1.70 (1.29-2.23)	<0.001	1.95 (1.58-2.41)	<0.001
H (medical treatment for hypertension)	1	1.04 (0.84-1.28)	0.74	1.22 (0.92-1.62)	0.17	1.06 (0.85-1.33)	0.59
A_2 (age>=75)	2	2.58 (2.19-3.05) **	<0.001**	2.48 (1.98-3.10) **	<0.001**	2.72 (2.26-3.27)**	<0.001 **
D (diabetes)	1	1.88 (1.42-2.48)	<0.001	2.22 (1.56-3.17)	<0.001	1.87 (1.39-2.52)	<0.001
S_2 (previous TCI, stroke or arterial embol)	2	1.32 (1.16-1.49)	<0.001	1.23 (1.02-1.48)	0.027	1.32 (1.15-1.52)	<0.001
V (arteriosclerotic heart disease)	1	1.67 (1.37-2.04)	<0.001	1.39 (1.04-1.85)	0.025	1.60 (1.29-1.98)	<0.001
A (66<=age<=74)	1	See A2 above	-	See A2 above	-	See A2 above	-
Sc (Female)	1	1.33 (1.07-1.64)	0.008	1.27 (0.96-1.68)	0.09	1.40 (1.11-1.75)	0.004
A_2, C, D, V and A alone (A_2+C+D+V+A):							
A_2CDVA (0-5)	-	1.79 (1.64-1.95)	<0.001	1.71 (1.52-1.92)	<0.001	1.76 (1.61-1.93)	<0.001

Table S5:

CHA_2DS_2 -VASc score and its association with stroke in all patients (n = 1,415) and patients with no OAC at baseline (n=1,218).Abbreviations: **HR**, hazard ratio; **OAC**, oral anticoagulation; **CHA_2DS_2 –VASc** score (C: Congestive heart failure, **H**: Hypertension, **A_2**: Age≥75 years (double risk weight), **D**: Diabetes mellitus, **S**: previous Stroke/TIA/arterial embolism (double risk weight), **V**: Vascular disease, **A**: Age 65-74 years, **Sc**: (female) Sex category) which gives a total score from 0 to 9.

* Patients with unknown NYHA or unknown LVEF at baseline count as 0

** For the sum of A2 and A

*** S_2 takes the values 0 and 2. HR given here corresponds to an increase in S_2 by 1.